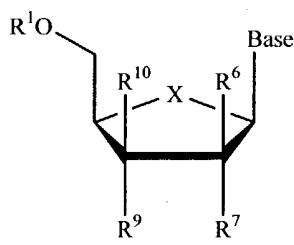


This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

Claims 1-88 (canceled)

Claims 89 (currently amended): A method for the treatment ~~or prophylaxis~~ of a flavivirus or pestivirus infection in a host, comprising administering an anti-virally effective amount of a compound of Formula XVII:



(XVII)

or a pharmaceutically acceptable salt ~~or ester~~ thereof, wherein:

Base is a purine ~~or pyrimidine base as defined herein~~;

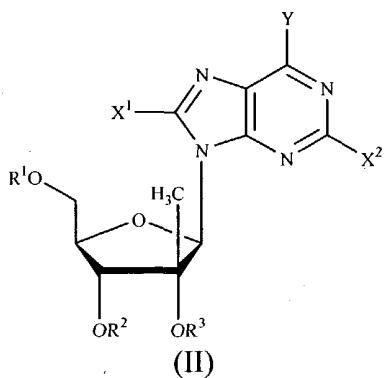
$R^1$  and  $R^2$  are independently H; phosphate (~~including monophosphate, diphosphate, triphosphate, or a stabilized phosphate prodrug~~); a stabilized phosphate prodrug; acyl (~~including lower acyl~~); alkyl (~~including lower alkyl~~); sulfonate ester; ~~including alkyl or arylalkyl sulfonyl including methanesulfonyl and~~; benzyl, wherein the phenyl group is optionally substituted with one or more substituents as described in the definition of aryl given herein; a lipid; ~~including a phospholipid~~; an amino acid; a carbohydrate; a peptide; a cholesterol; or other pharmaceutically acceptable leaving group which when administered *in vivo* is capable of providing a compound wherein  $R^1$  and  $R^2$  are independently H or phosphate;

$R^6$  is ~~hydrogen~~, hydroxy, alkyl (~~including lower alkyl~~), azido, cyano, alkenyl, alkynyl, Br-vinyl,  $-C(O)O$ (alkyl),  $-C(O)O$ (lower alkyl),  $-O$ (acyl),  $-O$ (lower acyl),  $-O$ (alkyl),  $-O$ (lower alkyl),  $-O$ (alkenyl), chloro, bromo, fluoro, iodo,  $NO_2$ ,  $NH_2$ ,  $-NH$ (lower alkyl),  $-NH$ (acyl),  $-N$ (lower alkyl)<sub>2</sub>, ~~or~~  $-N$ (acyl)<sub>2</sub>;

R<sup>7</sup> and R<sup>9</sup> are independently hydrogen, OR<sup>2</sup>, hydroxy, alkyl (including lower alkyl), azido, cyano, alkenyl, alkynyl, Br-vinyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(lower alkyl), -O(alkenyl), chlorine, bromine, iodine, NO<sub>2</sub>, NH<sub>2</sub>, -NH(lower alkyl), -NH(acyl), -N(lower alkyl)<sub>2</sub>, or -N(acyl)<sub>2</sub>;  
R<sup>10</sup> is H, alkyl (including lower alkyl), chlorine, bromine or iodine;  
alternatively, R<sup>7</sup> and R<sup>9</sup>, or R<sup>7</sup> and R<sup>10</sup> can come together to form a bond; and  
X is O, S, SO<sub>2</sub> or CH<sub>2</sub>.

Claims 90-129 (canceled)

Claim 130 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an anti-virally effective amount of a compound of Formula II:



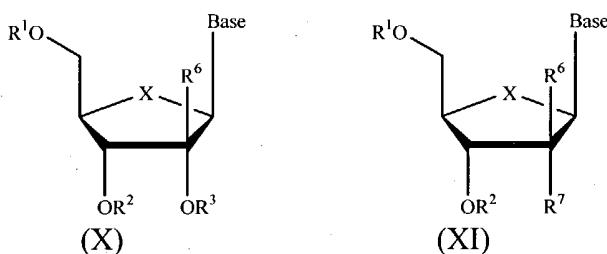
or a pharmaceutically acceptable salt or ester thereof, wherein:

R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are independently H; phosphate or a stabilized phosphate prodrug; acyl; alkyl; sulfonate ester; or benzyl, wherein the phenyl group is optionally substituted with one or more substituents; a lipid; an amino acid; a carbohydrate; a peptide; cholesterol; or other pharmaceutically acceptable leaving group which when administered *in vivo* is capable of providing a compound wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are independently H or phosphate; and

Y is hydrogen, bromo, chloro, fluoro, iodo, OR<sup>4</sup>, NR<sup>4</sup>R<sup>5</sup> or SR<sup>4</sup>;

$X^1$  and  $X^2$  are independently selected from the group consisting of H, straight chained, branched or cyclic alkyl, CO-alkyl, CO-aryl, CO-alkoxyalkyl, chloro, bromo, fluoro, iodo,  $OR^4$ ,  $NR^4NR^5$  or  $SR^4$ ; and  
 $R^4$  and  $R^5$  are independently hydrogen, acyl, or alkyl.

Claim 131 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an anti-virally effective amount of a compound of Formula X or XI:



or a pharmaceutically acceptable salt or ester thereof, wherein:

Base is a purine;

$R^1$ ,  $R^2$  and  $R^3$  are independently H; phosphate or a stabilized phosphate prodrug; acyl; alkyl; sulfonate ester; or benzyl, wherein the phenyl group is optionally substituted; a lipid; an amino acid; a carbohydrate; a peptide; cholesterol; or other pharmaceutically acceptable leaving group which when administered *in vivo* is capable of providing a compound wherein  $R^1$ ,  $R^2$  and  $R^3$  are independently H or phosphate;

$R^6$  is hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl,  $-C(O)O(alkyl)$ ,  $-C(O)O(lower\ alkyl)$ ,  $-O(acyl)$ ,  $-O(lower\ acyl)$ ,  $-O(alkyl)$ ,  $-O(lower\ alkyl)$ ,  $-O(alkenyl)$ , chloro, bromo, fluoro, iodo,  $NO_2$ ,  $NH_2$ ,  $-NH(lower\ alkyl)$ ,  $-NH(acyl)$ ,  $-N(lower\ alkyl)_2$ , or  $-N(acyl)_2$ ;

$R^7$  is hydrogen,  $OR^3$ , hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl,  $-C(O)O(alkyl)$ ,  $-C(O)O(lower\ alkyl)$ ,  $-O(acyl)$ ,  $-O(lower\ acyl)$ ,  $-O(alkyl)$ ,  $-O(lower\ alkyl)$ ,  $-O(alkenyl)$ , chlorine, bromine, iodine,  $NO_2$ ,  $NH_2$ ,  $-NH(lower\ alkyl)$ ,  $-NH(acyl)$ ,  $-N(lower\ alkyl)_2$ , or  $-N(acyl)_2$ ; and

X is O, S, SO<sub>2</sub> or CH<sub>2</sub>

Claim 132 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, wherein, in the compound of Formula XVII:

$R^{10}$  is H, alkyl, chlorine, bromine or iodine;

$R^7$  and  $R^9$  are independently hydrogen,  $OR^2$ , alkyl, alkenyl, alkynyl, Br-vinyl, O-alkenyl, chlorine, bromine, iodine,  $NO_2$ ,  $NH_2$ , -NH(lower alkyl), -NH(acyl), -N(lower alkyl)<sub>2</sub>, or -N(acyl)<sub>2</sub>;

$R^6$  is alkyl, chlorine, bromine or iodine;

alternatively,  $R^7$  and  $R^9$ , or  $R^8$  and  $R^9$  can come together to form a bond; and

$X$  is O, S,  $SO_2$  or  $CH_2$ .

Claim 133 (new): The method of claim 89 wherein  $R^1$  is hydrogen or phosphate.

Claim 134 (new): The method of claim 89 wherein  $R^2$  is hydrogen, acyl or alkyl.

Claim 135 (new): The method of claim 89 wherein  $R^6$  is alkyl.

Claim 136 (new): The method of claim 89 wherein  $R^7$  and  $R^9$  are independently hydrogen,  $OR^2$ , or hydroxy.

Claim 137 (new): The method of claim 89 wherein  $R^7$  is hydroxy.

Claim 138 (new): The method of claim 89 wherein  $R^9$  is hydroxy.

Claim 139 (new): The method of claim 89 wherein  $R^7$  and  $R^9$  are hydroxy.

Claim 140 (new): The method of claim 89 wherein  $R^{10}$  is hydrogen.

Claim 141 (new): The method of claim 89 wherein  $X$  is O.

Claim 142 (new): The method of claim 89 wherein

R<sup>1</sup> is hydrogen or phosphate;

R<sup>2</sup> is hydrogen, acyl or alkyl;

R<sup>6</sup> is alkyl;

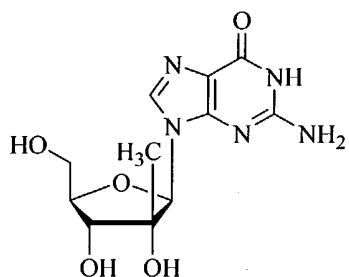
R<sup>7</sup> and R<sup>9</sup> are independently hydrogen, OR<sup>2</sup>, or hydroxy;

R<sup>10</sup> is hydrogen; and

X is O.

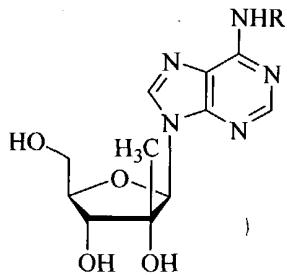
Claim 143 (new): The method of claim 89, wherein the base is a purine selected from the group consisting of N<sup>6</sup>-alkylpurines, N<sup>6</sup>-acylpurines (wherein acyl is C(O)(alkyl, aryl, alkylaryl, or arylalkyl), N<sup>6</sup>-benzylpurine, N<sup>6</sup>-halopurine, N<sup>6</sup>-vinylpurine, N<sup>6</sup>-acetylenic purine, N<sup>6</sup>-acyl purine, N<sup>6</sup>-hydroxyalkyl purine, N<sup>6</sup>-thioalkyl purine, N<sup>2</sup>-alkylpurines, N<sup>2</sup>-alkyl-6-thiopurines, N<sup>2</sup>-alkylpurines, N<sup>2</sup>-alkyl-6-thiopurines, 5-azacytidinyl, guanine, adenine, hypoxanthine, 2,6-diaminopurine, and 6-chloropurine.

Claim 144 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



or a pharmaceutically acceptable salt or ester thereof.

Claim 145 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:

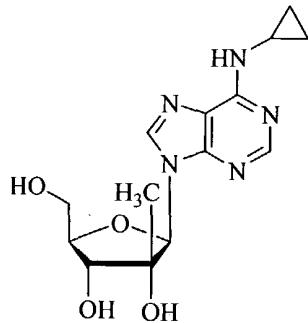


or a pharmaceutically acceptable salt or ester thereof, wherein R is hydrogen or alkyl.

Claim 146 (new): The method of claim 145, wherein R is methyl, ethyl, propyl, isopropyl, or cyclopropyl.

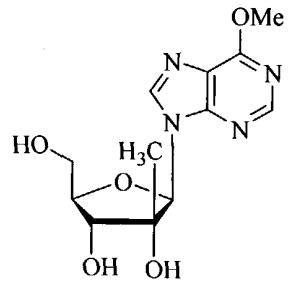
Claim 147 (new): The method of claim 146 wherein R is butyl, isobutyl, *t*-butyl, pentyl, cyclopentyl, isopentyl, or neopentyl.

Claim 148 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



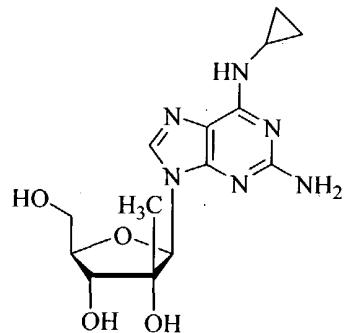
or a pharmaceutically acceptable salt or ester thereof.

Claim 149 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



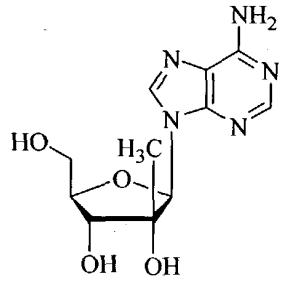
or a pharmaceutically acceptable salt or ester thereof.

Claim 150 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



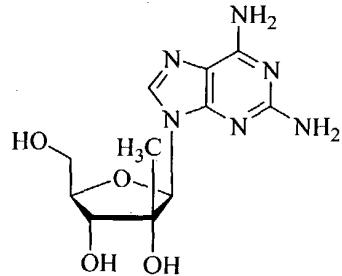
or a pharmaceutically acceptable salt or ester thereof.

Claim 151 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



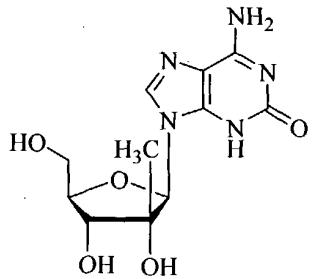
or a pharmaceutically acceptable salt or ester thereof.

Claim 152 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



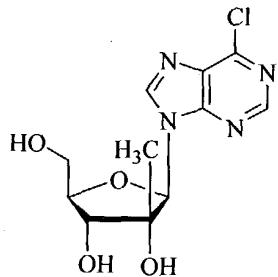
or a pharmaceutically acceptable salt or ester thereof.

Claim 153 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



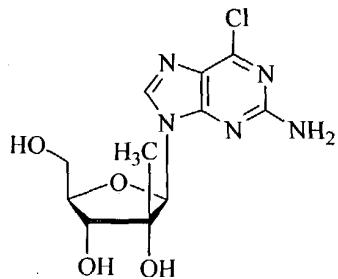
or a pharmaceutically acceptable salt or ester thereof.

Claim 154 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



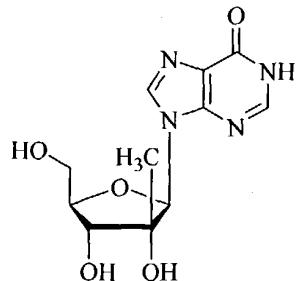
or a pharmaceutically acceptable salt or ester thereof.

Claim 155 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



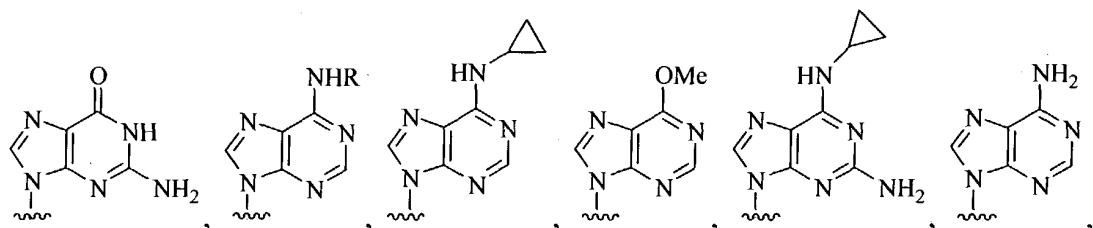
or a pharmaceutically acceptable salt or ester thereof.

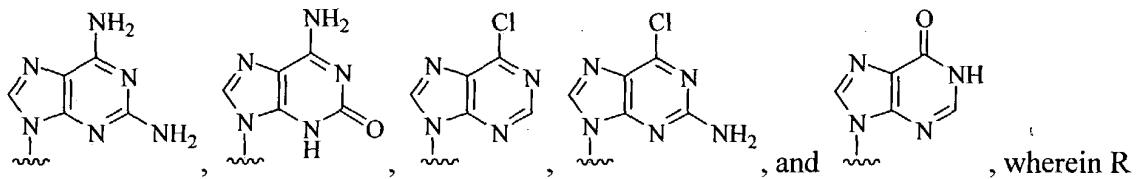
Claim 156 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



or a pharmaceutically acceptable salt or ester thereof.

Claim 157 (new): The method of claim 89 for the treatment of a flavivirus or pestivirus infection in a host, wherein the purine base is selected from the group consisting of





is methyl, ethyl, propyl, isopropyl, butyl, isobutyl, *t*-butyl, pentyl, cyclopentyl, isopentyl, or neopentyl.

Claim 158 (new): The method of claim 89, wherein the method comprises administering the compound or a pharmaceutically acceptable salt or ester thereof in combination or alternation with a second anti-flavivirus or anti-pestivirus agent.

Claim 159 (new): The method of claim 158, wherein the second anti-flavivirus or anti-pestivirus agent is selected from the group consisting of interferon, ribavirin, a protease inhibitor, a thiazolidine derivative, a polymerase inhibitor, and a helicase inhibitor.

Claim 160 (new): The method of claim 159, wherein the second anti-flavivirus or anti-pestivirus agent is interferon.

Claim 161 (new): The method of claim 159, wherein the second anti-flavivirus or anti-pestivirus agent is a protease inhibitor.

Claim 162 (new): The method of claim 159, wherein the second anti-flavivirus or anti-pestivirus agent is ribavirin.

Claim 163 (new): The method of claim 89, wherein the compound is in the form of a dosage unit.

Claim 164 (new): The method of claim 163, wherein the dosage unit contains 50 to 1000 mg of said compound.

Claim 165 (new): The method of claim 163, wherein said dosage unit is a tablet or capsule.

Claim 166 (new): The method of claim 89, wherein the host is a human.

Claim 167 (new): The method of claim 89, wherein the compound is in substantially pure form.

Claim 168 (new): The method of claim 89, wherein the compound is at least 90% by weight of the  $\beta$ -D-isomer.

Claim 169 (new): The method of claims 89, wherein the compound is at least 95% by weight of the  $\beta$ -D-isomer.

Claim 170 (new): The method of claim 89, wherein the flavivirus or pestivirus is a Dengue virus.

Claim 171 (new): The method of claim 89, wherein the flavivirus or pestivirus is a West Nile virus.

Claim 172 (new): The method of claim 89, wherein the flavivirus or pestivirus is a yellow fever virus.

Claim 173 (new): The method of claim 89, wherein the flavivirus or pestivirus is a bovine viral diarrhea virus (BVDV).

Claim 174 (new): The method of claim 89, wherein the flavivirus or pestivirus is not a hepatitis C virus.